The Three States of Matter

Answer these questions:

Q1 Give four everyday examples of each of the three states of matter.

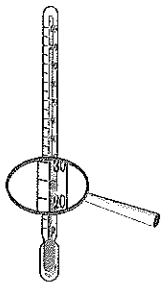
Q2 Complete the following diagram by naming each change of state — A, B, C, and D.

Q3 a) Where does the energy supplied to the solid or liquid always go?

b) What does this make happen?

c) What has to be overcome for a solid to change to a liquid, and a liquid to a gas?

Q4 Use the table below to answer the questions that follow it:



Substance	Melting Point (°C)	Boiling Point (°C)
Zinc	420	907
Oxygen	-238	-183
Bromine	-7	59
Mercury	-39	357

a) What temperature is **room temperature**?

b) Which element melts at the **lower temperature** — oxygen or mercury?

c) Name an element that is a **solid** at room temperature.

d) Name an element that is a **liquid** at room temperature.

e) Name an element that is a **gas** at room temperature.

f) Name an element that is a **liquid** at a temperature of 60°C.

g) Name a substance that is a **solid** at both room temperature and 200°C.

h) Name a substance that is a **liquid** at room temperature, but a **gas** at 100°C.

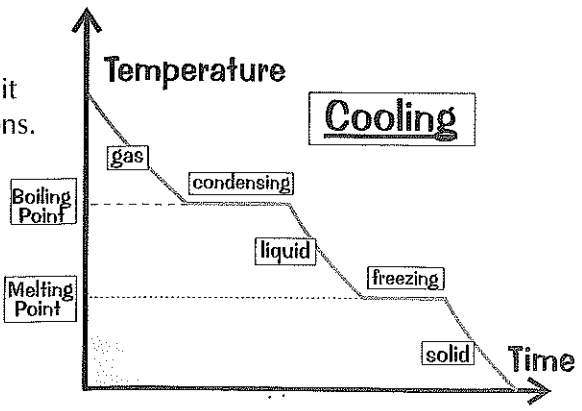
i) **Explain** what happens to the particles in a **solid** as it is heated and changes to a **liquid**.

j) **Explain** in your own words what **evaporation** is.

Q5 Look at the graph opposite.

This shows how the temperature of wax changes as it is cooled. **Explain** why the graph has two flat sections.

(Words to use: *Condensing, freezing, temperature, particles, flat sections*).



Q6 **Describe** what happens to the particles in water when it freezes.

Top Tips: Changes of state mean heat energy is going in or out of the substance — the more energy in a substance, the faster the particles can move . With this fact you'll explain what's happening in changes of state and interpret cooling and heating curves with ease.